

Notice of Allowability	Application No.	Applicant(s)	
	10/827,335	MIZUTANI ET AL.	
	Examiner	Art Unit	
	George Nguyen	3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to Applicant's amendment filed on July 12, 2005.

2. The allowed claim(s) is/are 1-10.

3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some* c) None of the:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 1) hereto or 2) to Paper No./Mail Date _____.

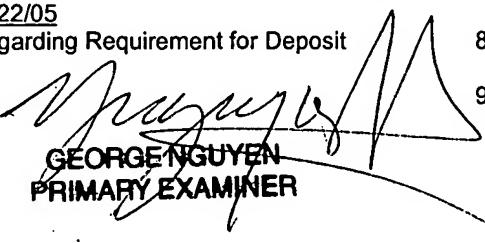
(b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of
 Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
 Paper No./Mail Date 04/22/05
- 4. Examiner's Comment Regarding Requirement for Deposit
 of Biological Material
- 5. Notice of Informal Patent Application (PTO-152)
- 6. Interview Summary (PTO-413),
 Paper No./Mail Date _____.
- 7. Examiner's Amendment/Comment
- 8. Examiner's Statement of Reasons for Allowance
- 9. Other _____.


GEORGE NGUYEN
PRIMARY EXAMINER

Art Unit: 3723

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: the specific limitations of "a grinding fluid supply-nozzle ... smaller than a right angle" in the combination as claimed in claim 1, and "a grinding fluid supply-nozzle ... smaller than a right angle" in the combination as claimed in claim 6 are not anticipated nor made obvious by the prior art of record in the examiner's opinion. For example, Hykes'5,833,523 discloses a variable volume coolant system for delivering liquid coolant to the interface defined between a machine tool and a workpiece to be abraded to a desired size and curvature. In col. 3, lines 1-2, Hykes discloses that the opposite ends of the shaft **20** of the workpiece are inserted into, and grasped by the chucks, so that the eccentric surfaces **22** of the workpiece are retained in fixed position during machining operation.

surfaces **22** of the workpiece are retained in fixed position during machining operations.

Machine **10** also includes a drive motor **24**, and a shaft and lead screw drive mechanism **26** for advancing wheel head carriage **28** along pad **30**. Axle **32** of grinding wheel **34**, which may be made of CBN or similar abrasive materials, is secured to carriage **28**. Motor **24**, when energized, advances, or retracts, wheel head carriage **28** in the longitudinal direction, so that wheel **34** can grind the eccentric surfaces **22** of the workpiece to the desired size and shape. Motor **36**, via endless belt **38**, delivers the motive power to wheel **34**, for precise, high speed grinding, after the carriage **28** has been advanced to the proper position.

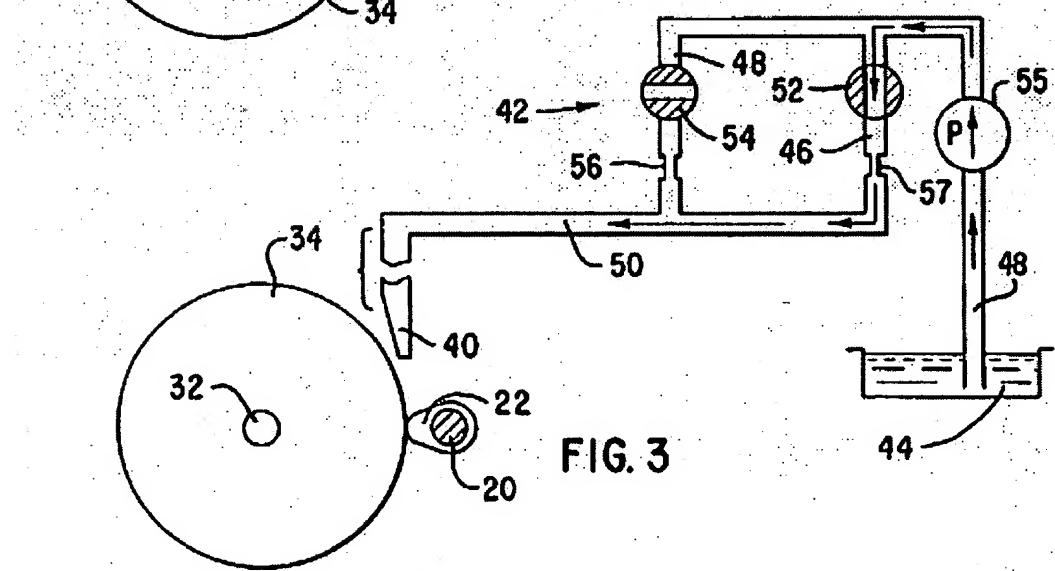
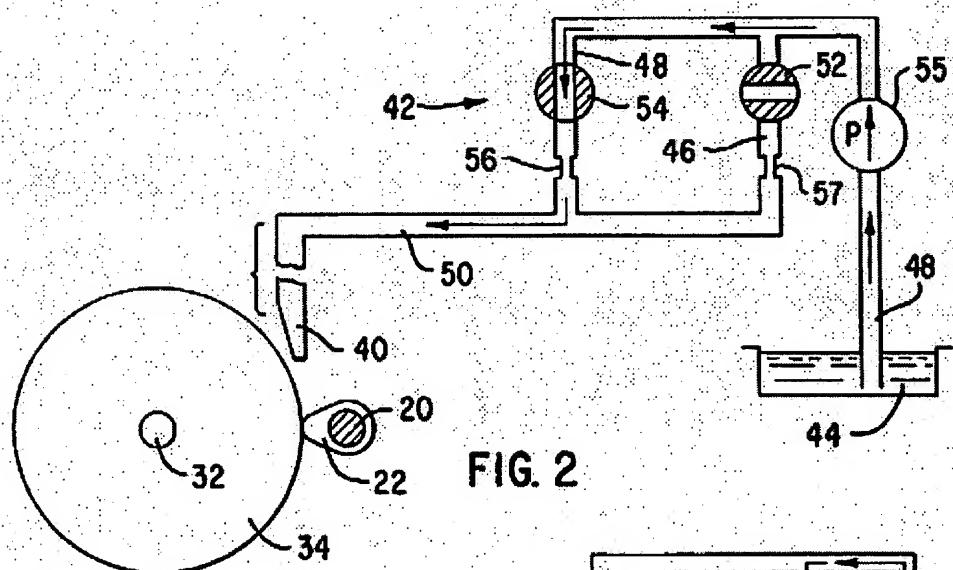
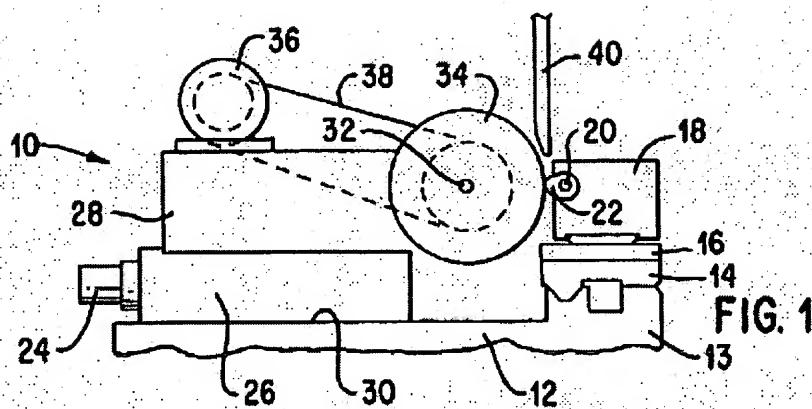
Nozzle **40** is positioned above the point of contact for the grinding wheel and the workpiece. The nozzle delivers liquid coolant, usually a water based fluid or oil, to the grinding wheel and to the workpiece, in order to cool same, and to wash away debris, commonly known as "swarf."

FIG. 2 and FIG. 3 show, in a schematic manner, the flow control system **42** for delivering a variable volume of coolant to nozzle **40** for discharge. The flow control system includes a reservoir **44**, or other common pressure source, connected to conduits **46**, **48** that lead into common pipe **50** that terminates in nozzle **40**. A first valve **52** is situated in conduit **46**, while a second valve **54** is situated in conduit **48**. Flow restricting components, such as restrictor **56** in line **48**, are connected in series with valve **54**.

U.S. Patent

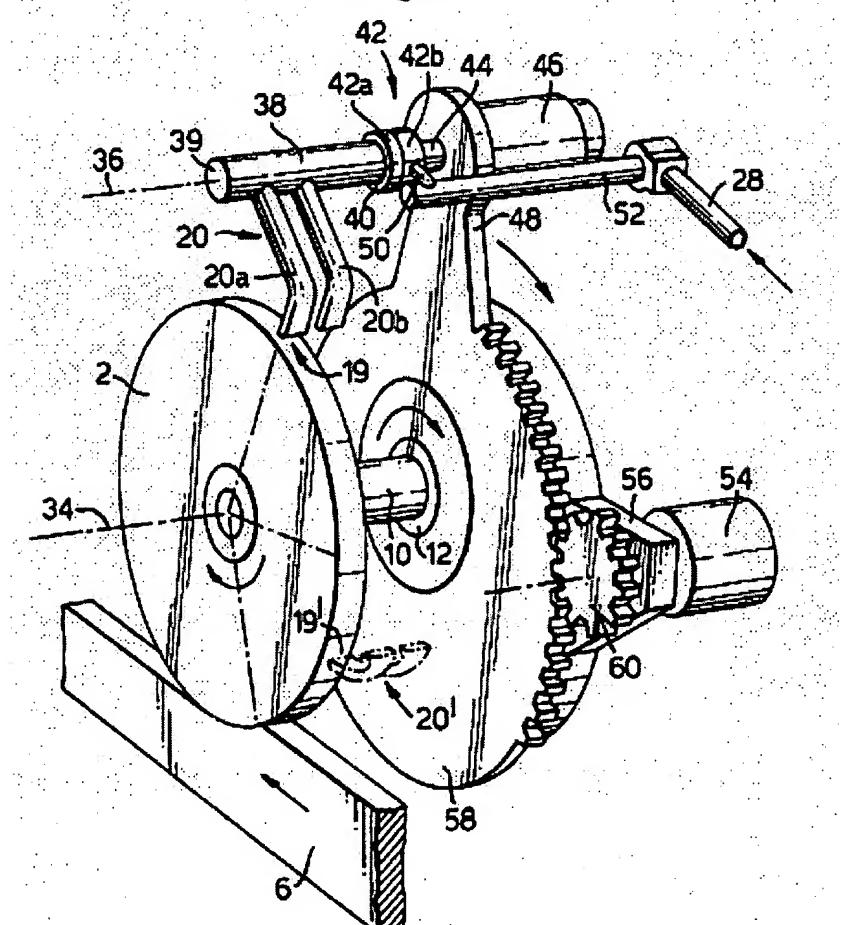
Nov. 10, 1998

5,833,523



With reference to Figure 2, col. 2, line 63 to col. 3, line 34, Hill et al.'6,123,606 discloses a jet 18 of liquid coolant is directed through nozzle means 20 at an aiming point 19 on the periphery of wheel 2. The nozzle 20 is positioned close to the periphery of the wheel 2 to deliver the very high pressure of jet 18 at the wheel in a substantially radial direction to the wheel circumference at a point approximately 45° in advance of the cutting region on workpiece 6.

Fig.2.



However, the prior art of record fails to provide or suggest the specific limitations of "a grinding fluid supply-nozzle ... smaller than a right angle" in the combination as claimed in claim 1, and "a grinding fluid supply-nozzle ... smaller than a right angle" in the combination as claimed in claim 6.

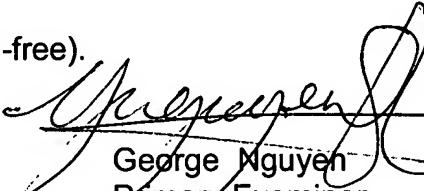
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Nguyen whose telephone number is 571-272-4491. The examiner can normally be reached on Monday-Friday/630AM-300PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

George Nguyen
Primary Examiner



George Nguyen
Primary Examiner
Art Unit 3723

GN – October 13, 2005